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| APPLICATION N     | NO.                     | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO. |  |
|-------------------|-------------------------|-------------|----------------------|-------------------------|------------------|--|
| 10/657,740        |                         | 09/08/2003  | John C. Salerno      | 01794/100H406-US1       | 8852             |  |
| 7278              | 7590                    | 06/17/2004  |                      | EXAMINER                |                  |  |
| DARBY<br>P. O. BO | ' & DARE<br>X 5257      | BY P.C.     | DESAI, ANAND U       |                         |                  |  |
|                   | NEW YORK, NY 10150-5257 |             |                      | ART UNIT                | PAPER NUMBER     |  |
|                   |                         |             |                      | 1653                    | 1653             |  |
|                   |                         |             |                      | DATE MAILED: 06/17/2004 |                  |  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|   | Application No.   | Applicant(s)  |  |  |  |  |  |
|---|---|---|--|--|--|--|--|
|   |   |   |  |  |  |  |  |
| Office Action Summary   | 10/657,740  | SALERNO ET AL.  |  |  |  |  |  |
| <b></b>   | Examiner  | Art Unit  |  |  |  |  |  |
| The MAILING DATE of this communication app  | Anand U Desai, Ph.D.  | 1653  |  |  |  |  |  |
| Period for Reply  |   |   |  |  |  |  |  |
| A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a reply - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).         | 86(a). In no event, however, may a reply be time within the statutory minimum of thirty (30) days will apply and will expire SIX (6) MONTHS from a cause the application to become ABANDONE | ely filed s will be considered timely. the mailing date of this communication. O (35 U.S.C. § 133). |  |  |  |  |  |
| Status  |   |   |  |  |  |  |  |
| 1)⊠ Responsive to communication(s) filed on 19 Ap   | <u>oril 2004</u> .  |   |  |  |  |  |  |
|   | action is non-final.  |   |  |  |  |  |  |
|   | , <del></del>   |   |  |  |  |  |  |
| Disposition of Claims   |   |   |  |  |  |  |  |
| <ul> <li>4)  Claim(s) 1-41 is/are pending in the application.</li> <li>4a) Of the above claim(s) is/are withdraw</li> <li>5)  Claim(s) is/are allowed.</li> <li>6)  Claim(s) is/are rejected.</li> <li>7)  Claim(s) is/are objected to.</li> <li>8)  Claim(s) 1-41 are subject to restriction and/or expressions.</li> </ul>  | vn from consideration.  |   |  |  |  |  |  |
| Application Papers  |   |   |  |  |  |  |  |
| 9)☐ The specification is objected to by the Examiner.   |   |   |  |  |  |  |  |
| 10)☐ The drawing(s) filed on is/are: a)☐ accepted or b)☐ objected to by the Examiner.   |   |   |  |  |  |  |  |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).   |   |   |  |  |  |  |  |
| Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  |   |   |  |  |  |  |  |
| Priority under 35 U.S.C. § 119  |   |   |  |  |  |  |  |
| <ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul> |   |   |  |  |  |  |  |
| Attachment(s)   |   |   |  |  |  |  |  |
| 1) Notice of References Cited (PTO-892)   | 4) Interview Summary  |   |  |  |  |  |  |
| Notice of Draftsperson's Patent Drawing Review (PTO-948)     Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)     Paper No(s)/Mail Date  | Paper No(s)/Mail Da 5) Notice of Informal Pa 6) Other:  | atent Application (PTO-152)   |  |  |  |  |  |

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## **DETAILED ACTION**

## Election/Restrictions

- 1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-11, drawn to an isolated truncated  $\alpha$ -crystallin polypeptide, classified in class 530, subclass 350.
  - II. Claims 11-17, drawn to an isolated nucleic acid encoding the truncated  $\alpha$ crystallin polypeptide, classified in class 435, subclass 6, and 69.1.
  - III. Claims 18-41, drawn to an expression vector comprising a nucleic acid encoding a small heat shock protein, and a nucleic acid encoding a protein, polypeptide, or fragment thereof, wherein said nucleic acids are operatively associated with an expression control sequence, a method of enhancing expression of a protein in a host cell comprising coexpressing said protein with a small heat shock protein, and a thermo tolerant host cell genetically modified to express a small heat shock protein, classified in class 435, subclass 69.1, 320.1, 325, 252.3 and class 536, subclass 23.4.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the nucleic acids of Invention II are related to the protein of Invention I by virtue of encoding same. The DNA molecule has utility for the recombinant production of the protein in a host cell, as recited in the Claims of Invention I. Although the DNA molecule and protein are related since the DNA

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encodes the specifically claimed protein, they are distinct inventions because the protein product can be made by another and materially different process, such as by synthetic peptide synthesis or purification from the natural source. Further, the DNA may be used for processes other than the production of the protein, such as nucleic acid hybridization assay.

- 3. Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the protein of Invention I and the expression vector of Invention III are not disclosed as capable of use together, and they different functions. The protein of Invention I can be used in a different process to generate antibodies.
- 4. Inventions II and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the nucleic acid of Invention II can be used in a different process, such as a hybridization assay.
- 5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
- 6. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of

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the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. Process claims that depend from or otherwise include all the limitations of the patentable product will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of In re Ochiai, In re Brouwer and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. Failure to do so may result in a loss of the right to rejoinder. Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

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7. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

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8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anand U Desai, Ph.D. whose telephone number is (571) 272-0947. The examiner can normally be reached on Monday - Friday 9:00 a.m. - 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on (517) 272-0951. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KAREN COCHRANE CARLSON, PH.D. PRIMARY EXAMINER

Law Cchan Carbo PCD

June 3\_2004